

CLAIMS:

What is claimed is:

1. A method of encrypting data packets, comprising:
 2. selecting a byte within a source data packet;
 3. randomly selecting an available position within an encrypted data packet in which to place an encrypted byte corresponding to said selected byte of said source data packet;
 4. encrypting said selected byte using a random number to generate said encrypted byte; and
 5. placing said encrypted byte in said selected position within said encrypted data packet, wherein said selected byte of said source data packet is encrypted in an unconditionally secure manner.
6. The method of claim 1, further comprising:
 7. repeating said steps of selecting a byte, randomly selecting an available position, encrypting said selected byte, and placing said encrypted byte in said selected position for each byte within said source data packet.
8. The method of claim 2, further comprising:
 9. after encrypting all bytes of said source data packet, filling remaining positions within said encrypted data packet with random numbers.
10. The method of claim 2, further comprising:
 11. after encrypting all bytes of said source data packet, encrypting authentication data; and
 12. placing bytes of said encrypted authentication data in remaining positions within said encrypted data packet.

1 5. A one-time pad, comprising:
2 a memory device;
3 a nonrepeating, randomly ordered sequence of N numbers
4 within the range of 1 to N within the memory device; and
5 a plurality of arrays of random numbers within said
6 memory device, each array within said plurality of arrays
7 associated with a number within said sequence of numbers.

1 6. The one-time pad of claim 5, wherein each array within
2 the plurality of arrays comprises a character map.

1 7. The one-time pad of claim 5, wherein said sequence and
2 said plurality of arrays comprise a sheet.

1 8. The one-time pad of claim 5, further comprising:
2 a counter within said memory device, said counter
3 pointing to a sheet within a plurality of sheets within said
4 one-time pad.

1 9. An electronic checkbook, comprising:
2 a memory containing a plurality of encryption sheets,
3 each encryption sheet within the plurality of encryption
4 sheets including:

5 a string of N numbers within the range of 1 to N
6 arranged in a nonrepeating, randomly ordered sequence;
7 and

8 a plurality of random number arrays, each array
9 within said plurality of arrays associated with a
10 different number within said string of numbers; and

11 a plurality of identifiers associating each encryption
12 sheet within the plurality of encryption sheets with an
13 electronic check.

1 10. The electronic checkbook of claim 9, wherein each
2 encryption sheet and said associated identifier comprises an
3 unused electronic check.

1 11. The electronic checkbook of claim 9, wherein said
2 electronic check comprises information encrypted using an
3 encryption sheet within said plurality of encryption sheets.

1 12. The electronic checkbook of claim 11, wherein said
2 electronic check further comprises:

3 a plurality of encrypted bytes generated from a plurality
4 of source bytes,

5 wherein each encrypted byte is placed in a position
6 within said plurality of encrypted bytes identified by a
7 position number located within said string at a location
8 corresponding to a location within said plurality of source
9 bytes containing a source byte utilized to generate said
10 encrypted byte, and

11 wherein each encrypted byte comprises a random number
12 corresponding, within an array associated with said position
13 number, to said source byte.

1 13. The electronic checkbook of claim 12, wherein said
2 electronic check further comprises:

3 authentication data encrypted with said plurality of
4 encrypted bytes.

1 14. The electronic checkbook of claim 9, wherein said
2 electronic checkbook further comprises:

3 ~~a port for connection to a receiving device.~~

1 15. A method of processing an electronic check, comprising:

2 14 receiving an electronic check encrypted using a one-time
3 Cn pad at a business;
4 transmitting a first copy of said electronic check to a
5 C1 payor's bank and a second copy of said electronic check to a
6 payee's bank; and
7 decoding said first copy of said electronic check at said
8 payor's bank using a copy of said one-time pad.

1 16. The method of claim 15, further comprising:
2 authenticating said electronic check; and
3 transmitting said first copy of said electronic check to
4 a clearinghouse with a payment authorization.

1 17. The method of claim 16, further comprising:
2 transmitting said second copy of said electronic check to
3 said clearinghouse;
4 comparing said first copy of said electronic check to
5 said second copy of said electronic check; and
6 responsive to determining that said first copy of said
7 electronic check matches said second copy of said electronic
8 check, processing a transaction transferring funds from said
9 payor's bank to said payee's bank.

1 18. A method of securing transmission of a global transponder
2 location, comprising:
3 receiving a request packet via a cellular communications
4 link to said global transponder;
5 encrypting a data packet containing a latitude and a
6 longitude for a location of said global transponder using a
7 one-time pad containing within said global transponder; and
8 transmitting said encrypted data packet to a central
9 computer over said cellular communications link.

1 19. The method of claim 18, wherein said step of encrypting
2 a data packet further comprises:

3 locating an identifier within said request packet;

4 comparing said identifier to a plurality of identifiers
5 in said global transponder, wherein identifier within said
6 plurality of identifiers is associated with a sheet within
7 said one-time pad;

8 responsive to determining that said identifier within
9 said request packet does not match any identifier within said
10 plurality of identifiers, terminating said cellular
11 communications link; and

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4 reading a position number within a randomly ordered,
5 nonrepeating sequence of N numbers within the range of 1 to N,
6 wherein said position number is at a location within said
7 sequence corresponding to a location of said selected
8 character within said source data packet;

9 reading a random number within a nonrepeating array of
10 random numbers associated with said position number, wherein
11 said random number corresponds within said array to said
12 selected character; and

13 placing said random number in a position within an
14 encrypted data packet corresponding to said position number.

22. The method of claim 21, further comprising:

repeating said steps of selecting a character, reading a position number, reading a random number corresponding to said selected character, and placing said random number in a position corresponding to said position number for each character within said source data packet to encrypt said source data packet.

23. The method of claim 22, further comprising:

after encrypting said source data packet, encrypting an authentication code; and

placing the encrypted authentication code within said encrypted data packet.

24. The method of claim 22, further comprising:

after encrypting said source data packet, encrypting a stop code; and

placing the encrypted stop code within said encrypted data packet.

1 25. A method of decoding data packets encrypted using a one-
2 time pad, comprising:

3 reading a position number within a randomly ordered,
4 nonrepeating sequence of N numbers within the range of 1 to N;

5 reading a random number located within an encrypted data
6 packet at a position corresponding to said position number;

7 determining a character corresponding to said random
8 number within a nonrepeating array of random numbers
9 associated with said position number; and

10 placing said character in a next available position
11 within a decoded data packet.

1 26. The method of claim 25, further comprising:

2 repeating said steps of reading a position number,
3 reading a random number, determining a character corresponding
4 to said random number, and placing said character in a next
5 available position for each character in said decoded data
6 packet.

1 27. The method of claim 26, further comprising:

2 detecting a stop code encrypted in said encrypted data
3 packet.

1 28. The method of claim 26, further comprising:

2 decoding an authentication code encrypted in said
3 encrypted data packet.

1 29. A computer program product for use with a data processing
2 system, comprising:

3 a computer usable medium;

4 first instructions on said computer usable medium for
5 selecting a character within a source data packet;

6 second instructions on said computer usable medium for
7 reading a position number within a randomly ordered,
8 nonrepeating sequence of N numbers within the range of 1 to N,
9 wherein said position number is at a location within said
10 sequence corresponding to a location of said selected
11 character within said source data packet;

12 third instructions on said computer usable medium for
13 reading a random number within a nonrepeating array of random
14 numbers associated with said position number, wherein said
15 random number corresponds within said array to said selected
16 character; and

17 fourth instructions on said computer usable medium for
18 placing said random number in a position within an encrypted
19 data packet corresponding to said position number.

30. A computer program product for use with a data processing
31 system, comprising:

32 a computer usable medium;

33 first instructions on said computer usable medium for
34 reading a position number within a randomly ordered,
35 nonrepeating sequence of N numbers within the range of 1 to N;

36 second instructions on said computer usable medium for
37 reading a random number located within an encrypted data
38 packet at a position corresponding to said position number;

39 third instructions on said computer usable medium for
40 determining a character corresponding to said random number
41 within a nonrepeating array of random numbers associated with
42 said position number; and

43 fourth instructions on said computer usable medium for
44 placing said character in a next available position within a
45 decoded data packet.

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